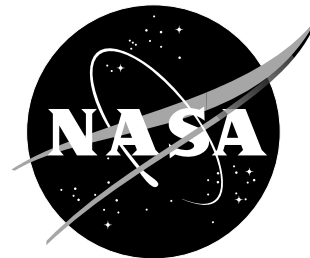


NewsRelease



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University aviation design competition winners named

NASA, the Federal Aviation Administration and the Air Force Research Laboratory (AFRL) today awarded honors to four university teams for their innovative general aviation designs. The winners of the National General Aviation Design Competition were recognized at a ceremony held at AirVenture2001, the Experimental Aircraft Association's Annual Convention and Fly-In at Oshkosh, WI.

The competition calls for individuals or teams of U.S. students to participate in a major national effort to rebuild the U.S. general aviation sector. Participants are challenged to meet the engineering goals of the Advanced General Aviation Transport Experiment (AGATE) project. For the purpose of the contest, general aviation aircraft are typically defined as single or twin engine (turbine or piston), single-pilot, fixed-wing aircraft for 2 - 6 passengers. NASA, the FAA and AFRL hope to stimulate breakthroughs in technology and their application in the general aviation marketplace.

The first place award was presented to a team from Embry Riddle Aeronautical University, Daytona Beach, FL. The team's design seeks to retrofit the popular Cessna 182 Skylane with a modern, turbocharged reciprocating diesel engine that runs on readily available jet A fuel. The review panel, which was comprised of representatives from NASA, FAA, industry and academia, praised the design for its practicality and rated the design effort as outstanding overall.

The first place award provides a total of \$3,000 to Embry Riddle's design team members and a \$5,000 award to the university's Aerospace Engineering Program. James Ladesic and Reda Mankbadi served as the team's faculty advisors.

Second place honors went to Penn State University, University Park, PA. The team's design, *Defiance*, features a four-place, single engine, turbofan-powered, general aviation aircraft. The twin tail boom, twin vertical tail layout uses both aluminum and modern composite materials, and features advanced aerodynamics, avionics and support systems. The second place award provides

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a \$2000 prize to the team. Hubert C. “Skip” Smith was the team’s faculty advisor. Penn State has won a place award in every year of the competition.

The third place award went to the University of Virginia, Charlottesville, VA, for a design dubbed *Vector Evolution*. The design combined the fast, high altitude performance of a business jet with short takeoff and landing performance of a typical general aviation aircraft. The team’s faculty advisor was James McDaniel. For third place, the team will share a \$1,000 prize.

An honorable mention in the General Aviation Design Competition went to Virginia Tech, Blacksburg, VA, and its collaborating international partner Loughborough University, Leicestershire, United Kingdom, for *Tempus*, an aircraft with a 3,600 nautical mile range. The team set a goal of efficient, affordable and comfortable transportation between international destinations. James Marchman was the Virginia Tech faculty advisor, and Gary Page and Lloyd Jenkinson served as faculty advisors at Loughborough.

The best use of Air Force-developed technologies award was also presented to the University of Virginia’s *Vector Evolution* design. The team received an additional \$3,000 from the Air Force Research Laboratory. These technologies included: wireless flight controls; non-hydraulic, electric actuator systems; and aerogel and serrated engine nozzle edge noise reduction techniques.

The competition for the 2000 - 2001 academic year was managed by the Virginia Space Grant Consortium. The AGATE project will end in September 2001, and the new competition will be managed by the General Aviation Programs Office, NASA Langley Research Center. A preliminary announcement for the new competition is available under EVENTS on the SATS web site (<http://sats.nasa.gov>).

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Note: Electronic images to illustrate this story are available at <http://oea.larc.nasa.gov/designimages>